

Standards/Measurement Criteria

(Draft)**

Graphic Communications

Photo Imaging - Option C

CIP No. 10.0300

*These state standards are designed to be delivered in a sequence of courses. *Standards 1-17 are to be taught as an introduction within the Graphic Communications program.

****Please note: The following CTE program Standards/Measurement Criteria are tentative until assessments are established.**

***1.0 EXPLORE CAREER PATHS IN GRAPHIC COMMUNICATIONS**

- 1.1 Examine traditional, non-traditional, and entrepreneurial occupational choices
- 1.2 Review graphic communications career opportunity information
- 1.3 Explain how personal choices affect career plans
- 1.4 Relate interests, skills, and attitudes to career exploration in graphic communications
- 1.5 Examine the role of education in careers in graphic communications

***2.0 DEMONSTRATE JOB SEARCH SKILLS**

- 2.1 Research employment opportunities in graphic communications
- 2.2 Critique a job application on line and in hard copy
- 2.3 Review professional dress, interviewing skills and resumes
- 2.4 Demonstrate the use of technology in a job search
- 2.5 Explore creative ways to make an impression in addition to a resume

***3.0 DEMONSTRATE EMPLOYABILITY SKILLS REQUIRED FOR THE GRAPHIC COMMUNICATIONS INDUSTRY**

- 3.1 Identify factors contributing to job success
- 3.2 Practice teamwork for a graphic communications environment
- 3.3 Demonstrate work ethics and behavior
- 3.4 Identify factors that contribute to successful performance at work
- 3.5 Discuss how social skills are helpful in obtaining and maintaining a job
- 3.6 Practice the use of technology as related to occupations
- 3.7 Discuss elements of professionalism
- 3.8 Examine skills needed for changing workforce demands

***4.0 PRACTICE EFFECTIVE COMMUNICATION SKILLS FOR THE GRAPHIC COMMUNICATIONS WORKPLACE**

- 4.1 Interpret verbal and nonverbal communication
- 4.2 Identify barriers to effective communication in a graphic communications environment
- 4.3 Practice skills used to communicate with clients in a graphic communications workplace
- 4.4 Identify guidelines for effective written communication (letters, reports, and email)
- 4.5 Recognize and adapt to language barriers, ethnicity and gender in a graphic workplace context

***5.0 PARTICIPATE IN LEADERSHIP ACTIVITIES SUCH AS THOSE SUPPORTED BY CAREER AND TECHNICAL STUDENT ORGANIZATIONS SUCH AS SkillsUSA**

- 5.1 Determine the roles and responsibilities that leaders and members bring to a graphic communications organization
- 5.2 Identify various leadership and personality styles
- 5.3 Evaluate characteristics of an effective team player in a graphic communications workplace
- 5.4 Identify characteristics of effective teams and teamwork
- 5.5 Practice techniques to involve each member of the team
- 5.6 Participate in graphic communications career development events
- 5.7 Develop a personal and professional growth plan
- 5.8 Demonstrate business etiquette and networking skills
- 5.9 Practice decision making processes

***6.0 EXPLORE PROBLEM SOLVING AND DECISION MAKING PROCESSES TO GRAPHIC COMMUNICATIONS SITUATIONS**

- 6.1 Practice problem-solving processes for a graphic communications environment
- 6.2 Describe methods of establishing priorities for a graphic communications workplace
- 6.3 Examine a plan of work and schedule
- 6.4 Identify need for evaluation of products/services

***7.0 DEMONSTRATE TECHNOLOGICAL LITERACY FOR THE GRAPHIC COMMUNICATIONS INDUSTRY**

- 7.1 Examine the uses of technology in the graphic communications field
- 7.2 Demonstrate basic usage of computers (input, storage, and output)
- 7.3 Access information electronically (via Internet, CD-ROM, etc.)
- 7.4 Apply basic commands of operating system software
- 7.5 Apply appropriate file and disc management techniques
- 7.6 Understand the basics of graphics software

***8.0 REVIEW FINANCIAL RECORDS AND ACCOUNTS FOR A GRAPHIC COMMUNICATIONS ORGANIZATION**

- 8.1 Review an annual graphic communications business budget
- 8.2 Explain checking account records
- 8.3 Explain accounts payable and accounts receivable
- 8.4 Review expense records
- 8.5 Review payroll records/information
- 8.6 Explain project estimating

***9.0 EXPLORE GRAPHIC COMMUNICATIONS SYSTEMS THEORY AND PRACTICE**

- 9.1 Explore how planning is used to improve overall organizational performance
- 9.2 Use organizational charts to identify workplace operations of a graphic communications business
- 9.3 Review how plans and budgets are revised to meet goals and objectives

***10.0 EXPLORE THE LEGAL AND ETHICAL ENVIRONMENT OF THE GRAPHIC COMMUNICATIONS INDUSTRY**

- 10.1 Explore the basic concepts involved in contract law, consumer law, and consumer credit and protection
- 10.2 Examine the relationship between ethics and the law for the graphic communications industry
- 10.3 Define ethical standards
- 10.4 Examine the problems related to maintaining ethical standards in situations without a clear standard
- 10.5 Identify steps for securing permission to use copyrighted materials
- 10.6 Discuss how credit is given for use of copyrighted materials
- 10.7 Identify the benefits of copyright laws
- 10.8 Review the liabilities associated with the graphic communications field

***11.0 EXPLORE MARKETING PRINCIPLES FOR GRAPHIC COMMUNICATIONS OPERATIONS**

- 11.1 Identify target markets
- 11.2 Select products or services to link with customer requirements
- 11.3 Identify strategies for promoting products/services

***12.0 PRACTICE SAFE WORKING PROCEDURES FOR A GRAPHIC COMMUNICATIONS ENVIRONMENT**

- 12.1 Explain appropriate safety precautions around common graphic communications job-site hazards
- 12.2 Explain the importance of the OSHA (Occupational Safety and Health Administration) standards, HazCom (Hazard Communication Standard) requirements and MSDS (Material Safety Data Sheets)
- 12.3 Recognize and demonstrate safe use of basic hand tools and chemicals for a Graphic communications workplace

***13.0 DEMONSTRATE DRAWING AND VISUALIZATION SKILLS REQUIRED FOR GRAPHIC COMMUNICATIONS**

- 13.1 Identify and analyze composition elements
- 13.2 Employ various types of drawing media and surfaces in traditional and digital form used in a graphic communications environment
- 13.3 Illustrate the basic elements and principles of design using traditional and digital media
- 13.4 Analyze how content and meaning are communicated in media production
- 13.5 Apply fundamentals of color theory in traditional or digital media

***14.0 PRACTICE MEASUREMENT TECHNIQUES FOR GRAPHIC COMMUNICATIONS APPLICATIONS**

- 14.1 Identify common measurement tools used in graphic communications and their functions
- 14.2 Select an appropriate measurement technique for a specific measurement need
- 14.3 Select and use the appropriate measurement tool for the task
- 14.4 Determine degree of accuracy required for a specific task or situation

***15.0 INPUT DATA FOR MEDIA APPLICATIONS**

- 15.1 Demonstrate the operation of hardware items that support data capture for media application software (e.g. scanner, digital camera, video input device, graphics tablet, and graphics expansion)
- 15.2 Select resolution for media data capture
- 15.3 Capture still images
- 15.4 Capture text and numeric data
- 15.5 Archive and manage data for media application software

***16.0 OUTPUT DATA FROM MEDIA APPLICATIONS**

- 16.1 Demonstrate the operation of hardware items that support data output from media application software (e.g. printer, projector, etc.)
- 16.2 Optimize data output for specific uses
- 16.3 Output still image
- 16.4 Output text and numeric data

***17.0 CREATE DIGITAL MEDIA PRODUCTS**

- 17.1 Select and communicate information in an appropriate digital format
- 17.2 Select appropriate productivity tool for solving a specific problem
- 17.3 Produce a multi-page product for print and/or digital distribution
- 17.4 Design, produce and evaluate a communication product using technology
- 17.5 Combine images, sound, text and visual transitions in a single production
- 17.6 Use computer-based tools to create printed media products

18.0 DEVELOP AN INDIVIDUAL CAREER PLAN FOR THE GRAPHIC COMMUNICATIONS INDUSTRY

- 18.1 Investigate graphic communications career options, including freelance and entrepreneurship
- 18.2 Develop career goals based on interests, aptitudes, and research
- 18.3 Review/revise plan/goals on annual basis
- 18.4 Manage personal and career goals
- 18.5 Describe factors that contribute to job satisfaction and success

19.0 PREPARE FOR EMPLOYMENT IN THE GRAPHIC COMMUNICATIONS INDUSTRY

- 19.1 Develop a résumé
- 19.2 Create an e-résumé
- 19.3 Develop an electronic and traditional portfolio of work samples to support a résumé
- 19.4 Complete job application process
- 19.5 Research graphic communications companies as potential employers
- 19.6 Demonstrate interviewing skills, including pre-interview preparation and post-interview follow-up

20.0 PARTICIPATE IN WORK-BASED LEARNING EXPERIENCES

- 20.1 Use technology appropriate for the job
- 20.2 Demonstrate positive work behaviors
- 20.3 Demonstrate positive interpersonal behaviors
- 20.4 Demonstrate safe and healthy work behaviors
- 20.5 Adapt to changes in the workplace
- 20.6 Participate in a variety of work-based experiences, paid or non-paid

21.0 DEMONSTRATE ORAL COMMUNICATION SKILLS APPLICABLE TO THE GRAPHIC COMMUNICATIONS FIELD

- 21.1 Conduct formal/informal research to collect appropriate topical information
- 21.2 Use questioning techniques to obtain needed information from audience
- 21.3 Interpret oral and nonverbal communications of audience
- 21.4 Demonstrate active listening during communications
- 21.5 Demonstrate appropriate use of technologies for a formal presentation
- 21.6 Prepare and deliver presentation
- 21.7 Deliver presentation incorporating the appropriate verbal and nonverbal communication techniques
- 21.8 Demonstrate effective telephone technique

22.0 DEMONSTRATE WRITTEN COMMUNICATION SKILLS APPLICABLE TO THE GRAPHIC COMMUNICATIONS FIELD

- 22.1 Conduct formal/informal research to collect appropriate topical information
- 22.2 Organize information and develop an outline
- 22.3 Write business communication using appropriate format for the situation
- 22.4 Using appropriate technology, prepare draft document using established rules for grammar, spelling and sentence construction
- 22.5 Utilize multiple technologies for written and presentation communications

23.0 EVALUATE THE ROLE OF SMALL BUSINESSES INCLUDING FREELANCE GRAPHIC COMMUNICATIONS IN THE ECONOMY

- 23.1 Evaluate role of small graphic communications business on local, state, national and international economies
- 23.2 List the factors, including personal traits, which contribute to the success of a graphic communications small business
- 23.3 Compare/contrast the advantages/disadvantages of sole proprietorships, partnerships and corporations
- 23.4 Research a business plan of an existing graphic communications business
- 23.5 Analyze the relationship of customer service and customer satisfaction on the success of a business

24.0 DEMONSTRATE BUSINESS AND FINANCIAL MANAGEMENT PRACTICES NEEDED FOR FREELANCE ARTISTS AND ENTREPRENEURS

- 24.1 Evaluate a budget based on an existing enterprise's business plan
- 24.2 Review financial information for decision making and planning
- 24.3 Research insurance and benefit needs for a graphic communications business
- 24.4 Research available banking services
- 24.5 Describe the impact of quality business communications on the success of an organization

25.0 PARTICIPATE IN LEADERSHIP ACTIVITIES SUCH AS THOSE SUPPORTED BY CAREER AND TECHNICAL STUDENT ORGANIZATIONS SUCH AS SkillsUSA

- 25.1 Determine the roles and responsibilities that leaders and members bring to an organization
- 25.2 Evaluate characteristics of effective teams
- 25.3 Evaluate characteristics of an effective team player
- 25.4 Practice techniques to involve each member of the team
- 25.5 Demonstrate team work
- 25.6 Practice effective meeting management
- 25.7 Demonstrate business etiquette
- 25.8 Practice decision-making process

26.0 USE PROFESSIONAL BUSINESS SKILLS OF THE GRAPHIC COMMUNICATIONS INDUSTRY

- 26.1 Identify education and training required to work in various graphic communications careers
- 26.2 Identify markets and types of businesses in graphic communications
- 26.3 Use industry terms and vocabulary in appropriate context
- 26.4 Investigate works of respected designers and photographers
- 26.5 Critique art and design work for technique, content, aesthetics, use of materials and problem solving
- 26.6 Use professional practices of graphic communications industries
- 26.7 Integrate customer relations skills in face-to-face and electronic communications
- 26.8 Create and present a professional portfolio

27.0 PRACTICE LEGAL AND ETHICAL BEHAVIOR REQUIRED FOR THE GRAPHIC COMMUNICATIONS INDUSTRY

- 27.1 Model ethical conduct in what is written, spoken or presented in a visual manner
- 27.2 Explain copyright law, work-for-hire, and other accepted business practices applicable to a graphic communications workplace
- 27.3 Differentiate stock photography and royalty free internet, and print
- 27.4 Evaluate the need for signed release forms
- 27.5 Explain procedures for the use of proprietary information
- 27.6 Practice an appropriate work ethic in commercial photography

28.0 PRACTICE SAFETY RULES AND PROCEDURES FOR THE GRAPHIC COMMUNICATIONS WORKPLACE

- 28.1 Follow approved shop dress code for safe operation, including personal safety equipment
- 28.2 Comply with OSHA safety regulations and practices
- 28.3 Understand approved methods to dispose of waste materials
- 28.4 Locate and read Material Safety Data Sheets (MSDS)
- 28.5 Follow safety procedures when operating graphic communications equipment
- 28.6 Read and follow instructions on warning labels
- 28.7 Demonstrate a working knowledge of the safety color code
- 28.8 Explain the right-to-know law

29.0 MANAGE BASIC COMPUTER CONCEPTS, OPERATIONS, AND APPLICATIONS

- 29.1 Use digital image preparation and output equipment
- 29.2 Use basic electronic publishing equipment
- 29.3 Apply basic commands of operating system software
- 29.4 Apply file and disk management techniques
- 29.5 Use industry-accepted software applications for word processing, graphics, image editing, scanning and page layout
- 29.6 Access and use the Internet for file transfer
- 29.7 Differentiate terminology referring to input, screen and output resolution
- 29.8 Optimize files for digital or print output

30.0 APPLY MATHEMATICAL CONCEPTS TO PROBLEMS IN GRAPHIC COMMUNICATIONS

- 30.1 Use measurement systems common to the printing industry
- 30.2 Use measurement tools common to the printing industry
- 30.3 Solve graphic measurement conversion problems
- 30.4 Solve ratio and proportion problems
- 30.5 Solve paper cutting problems

31.0 APPLY PRINCIPLES OF JOB PLANNING AND LAYOUT TO GRAPHIC COMMUNICATIONS CUSTOMER SPECIFICATIONS

- 31.1 Sequence the production work flow from initial need to a final product
- 31.2 Practice customer service functions
- 31.3 Explain the production information on a job ticket/jacket
- 31.4 Prepare a production information job ticket/jacket
- 31.5 Practice questions to understand client needs
- 31.6 Follow instruction to produce, modify or output files according to a customer supplied criteria

32.0 DEMONSTRATE DIGITAL IMAGE PREPARATION

- 32.1 Produce digital images using digital image capture equipment
- 32.2 Import a scanned image or digital camera photo into a digital imaging application
- 32.3 Select resolution, pixel depth and image type for scanned images
- 32.4 Select appropriate commands and menus of scanning software
- 32.5 Select appropriate commands, menus and palettes for a digital imaging application
- 32.6 Create a digital image according to specifications using an imaging application
- 32.7 Enhance digital images using painting and editing tools
- 32.8 Edit a digital image using editing, filtering, multiple layers and masking techniques
- 32.9 Apply principles and elements of design to digital image processing
- 32.10 Apply color theory to digital image processing
- 32.11 Differentiate RGB, CMYK, LAB color, grayscale and web color
- 32.12 Convert file formats
- 32.13 Optimize digital images and select file formats as specified for end-use requirements
- 32.14 Select appropriate mode and resolution for digital or print output

33.C EXPLORE TRADITIONAL PHOTOGRAPHY (PHOTO FINISHING, EQUIPMENT, AND FACILITIES)

- 33.1c Differentiate the types and uses of black and white films
- 33.2c Differentiate the types and uses of color films
- 33.3c Differentiate the type, use and care of film cameras and accessories
- 33.4c Identify characteristics of basic darkroom equipment and tools for black/white and color processing
- 33.5c Identify characteristics of darkroom equipment and tools for color processing
- 33.6c Explain proper use and care of darkroom and photo finishing lab equipment
- 33.7c Identify chemicals and explain development process for negatives, color negatives, transparencies, and prints

34.C USE A DIGITAL CAMERA

- 34.1c Differentiate the type, use and care of digital cameras and accessories
- 34.2c Select appropriate camera format for a given situation and end usage requirements
- 34.3c Determine the necessary equipment for a variety of tasks/situations for digital photography
- 34.4c Produce photos using a digital camera
- 34.5c Understand file size and ppi such as tif , jpeg, etc.
- 34.6c Select and use focusing techniques
- 34.7c Differentiate between wide and telephoto lenses and the aesthetic and technical reasons to select a lens
- 34.8c Select and use filters
- 34.9c Evaluate and troubleshoot common digital camera errors and problems

35.C PRODUCE PHOTOS FOR DIGITAL PHOTOGRAPHY

- 35.1c Incorporate the following elements in photographs: composition, formal qualities, scale, use of space and use of light
- 35.2c Incorporate visual design principles and elements in photographs
- 35.3c Illustrate color theory
- 35.4c Explain the psychology of color
- 35.5c Create photographic images to specification for content, mood and/or meaning

36.C PERFORM PHOTO FINISHING FOR DIGITAL PHOTOGRAPHY

- 36.1c Create print suitable for publication
- 36.2c Retouch a finished print
- 36.3c Dry mount and mat a print for presentation

37.C CONTROL LIGHT AND COMPOSITION IN PHOTOS FOR DIGITAL PHOTOGRAPHY

- 37.1c Relate lighting type, direction and camera location
- 37.2c Balance light color temperature in mixed light environments
- 37.3c Demonstrate the use of props
- 37.4c Plan setting, composition, camera angle and camera distance for a simple head-and-shoulders portrait under natural and artificial lighting conditions
- 37.5c Plan setting, composition, camera angle, camera distance and lighting for a series of outdoor portraits of one subject
- 37.6c Plan location, setting, composition, camera angle, camera distance and lighting for an informal small group portrait with existing indoor or outdoor light
- 37.7c Plan location, setting, composition, camera angle/focal plan, camera distance and lighting for a simple still life with one lamp plus reflector
- 37.8c Determine methods to elicit response from subjects
- 37.9c Explain the different qualities of hard, soft and reflective light

38.C PRODUCE STUDIO PHOTOS FOR DIGITAL PHOTOGRAPHY

- 38.1c Identify use and characteristics of studio equipment, light and accessories
- 38.2c Define parameters of photo shoot according to layout
- 38.3c Set up equipment for a photo shoot
- 38.4c Style subject matter according to layout
- 38.5c Define client's need and produce an image
- 38.6c Prepare finished photos for presentation
- 38.7c Identify bindery options including a variety of standard folds